

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P547282

Luminaire Tested: **FMR-24-4-LD4-4HI-35-UNV-93-87-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P547282
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-4HI-35-UNV-93-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

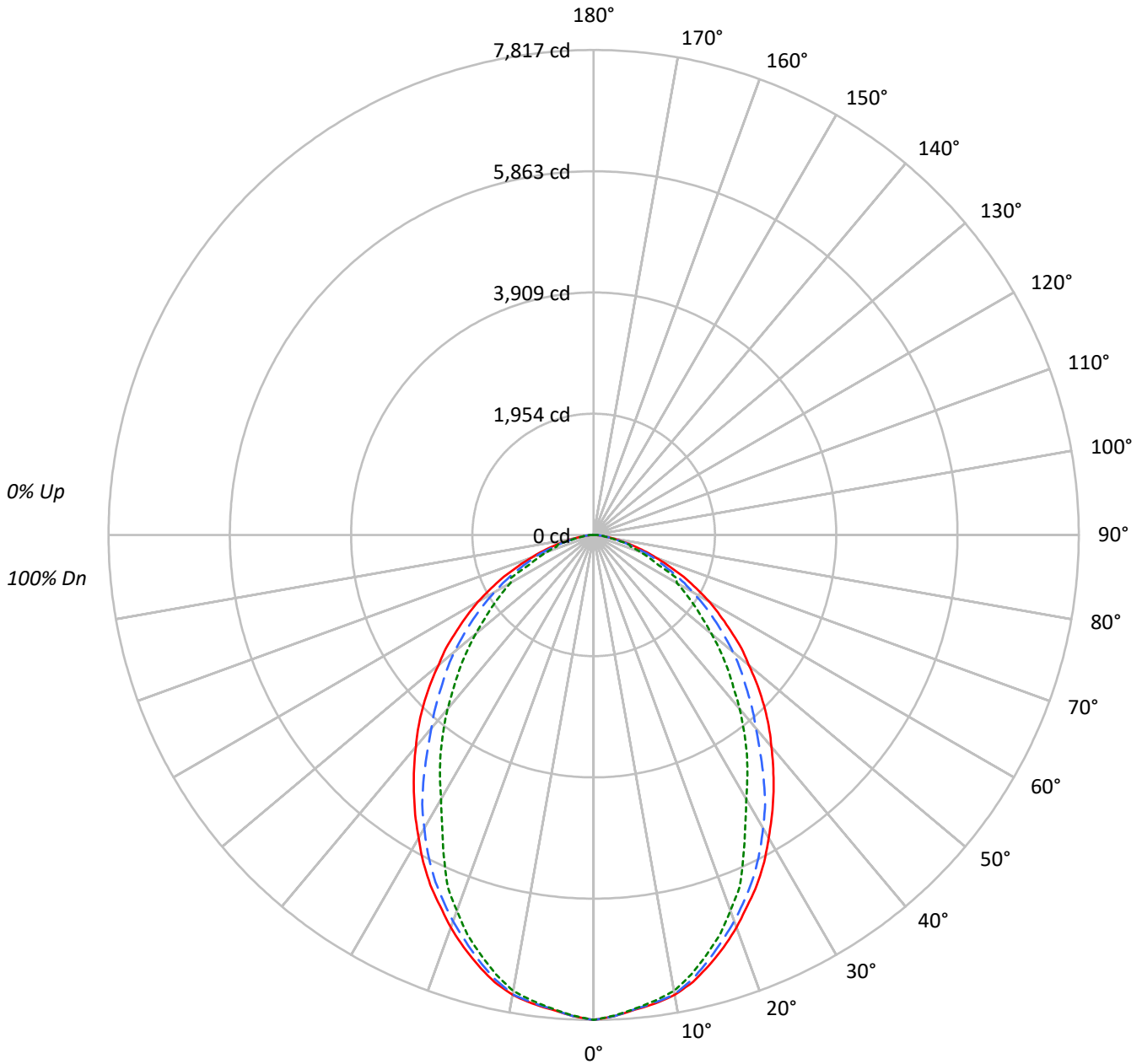
Lumens per Lamp: N/A
Luminaire Lumens: 15346.0 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10518	10518	10518
5°	10375	10363	10350
10°	10285	10273	10198
15°	10008	9907	9769
20°	9640	9485	9226
25°	9244	9043	8479
30°	8761	8480	7638
35°	8298	7838	7066
40°	7825	7143	6428
45°	7377	6603	5812
50°	6829	6129	5183
55°	6317	5554	4643
60°	5788	4961	4158
65°	5093	4344	3683
70°	4195	3804	3129
75°	3335	2913	3054
80°	2241	2101	1960
85°	1396	1673	1953



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	727.7	4.7
10°-20°	1997.0	13.0
20°-30°	2764.7	18.0
30°-40°	2948.0	19.2
40°-50°	2689.4	17.5
50°-60°	2107.0	13.7
60°-70°	1373.2	8.9
70°-80°	608.4	4.0
80°-90°	130.6	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	5489.4	35.8
0°-40°	8437.4	55.0
0°-60°	13233.8	86.2
0°-90°	15346.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15346.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7817	7817	7817	7817	7817	
5°	7682	7672	7672	7663	7663	729
15°	7184	7184	7112	7040	7013	2020
25°	6226	6190	6091	5874	5711	2859
35°	5052	5016	4772	4410	4302	3158
45°	3877	3796	3470	3181	3054	2986
55°	2693	2612	2368	2088	1979	2415
65°	1600	1509	1365	1392	1157	1576
75°	642	596	560	533	587	688
85°	90	99	108	118	126	125
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7817.0	7817.0	7817.0	7817.0	7817.0
2.5°	7762.8	7762.8	7762.8	7753.8	7753.8
5°	7681.5	7672.5	7672.5	7663.4	7663.4
7.5°	7618.2	7609.2	7600.2	7591.1	7573.0
10°	7527.9	7527.9	7518.8	7473.6	7464.6
12.5°	7383.3	7374.2	7338.1	7274.8	7256.8
15°	7184.5	7184.5	7112.2	7039.9	7012.8
17.5°	6967.6	6958.5	6868.2	6795.9	6759.7
20°	6732.6	6714.5	6624.2	6506.7	6443.4
22.5°	6470.5	6470.5	6362.1	6208.5	6145.2
25°	6226.5	6190.4	6091.0	5874.1	5711.4
27.5°	5946.4	5892.2	5783.7	5476.5	5286.7
30°	5639.1	5612.0	5458.4	5060.7	4916.2
32.5°	5349.9	5304.7	5142.1	4726.4	4608.9
35°	5051.7	5015.6	4771.6	4410.1	4301.6
37.5°	4753.5	4708.3	4401.0	4111.9	3976.3
40°	4455.3	4401.0	4066.7	3804.6	3660.0
42.5°	4175.1	4102.8	3777.5	3497.3	3334.7
45°	3876.9	3795.6	3470.2	3181.0	3054.5
47.5°	3578.7	3506.4	3208.2	2909.9	2765.3
50°	3262.4	3199.1	2928.0	2629.8	2476.2
52.5°	3000.3	2900.9	2638.8	2340.6	2214.1
55°	2693.0	2611.7	2367.7	2087.6	1979.1
57.5°	2412.9	2331.6	2105.6	1843.6	1753.2
60°	2150.8	2033.3	1843.6	1617.6	1545.3
62.5°	1861.6	1771.3	1608.6	1418.8	1509.2
65°	1599.6	1509.2	1364.6	1391.7	1156.7
67.5°	1310.4	1265.2	1138.7	1012.1	976.0
70°	1066.4	1012.1	967.0	831.4	795.3
72.5°	849.5	795.3	732.0	659.7	632.6
75°	641.6	596.4	560.3	533.2	587.4
77.5°	442.8	424.7	397.6	370.5	361.5
80°	289.2	280.1	271.1	262.1	253.0
82.5°	171.7	171.7	171.7	171.7	171.7
85°	90.4	99.4	108.4	117.5	126.5
87.5°	54.2	54.2	63.3	72.3	81.3
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)